



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,201	01/21/2004	Kia Silverbrook	MPA13US	1360

24011 7590 11/14/2006

SILVERBROOK RESEARCH PTY LTD
393 DARLING STREET
BALMAIN, NSW 2041
AUSTRALIA

EXAMINER

UHLENHAKE, JASON S

ART UNIT	PAPER NUMBER
----------	--------------

2853

DATE MAILED: 11/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,201	01/21/2004	Kia Silverbrook	MPA13US	1360
24011	7590	10/27/2006	EXAMINER	
SILVERBROOK RESEARCH PTY LTD 393 DARLING STREET BALMAIN, NSW 2041 AUSTRALIA			UHLENHAK, JASON S	
			ART UNIT	PAPER NUMBER
			2853	

DATE MAILED: 10/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/760,201

Applicant(s)

SILVERBROOK ET AL.

Examiner

Jason Uhlenhake

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 recites the limitations "the support member" and "the associated fluid distribution members" in Lines 2-3 of Claim 8. There is insufficient antecedent basis for this limitation in the claim. Proper correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 5 - 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook (U.S. Pat. 6,916,082) in view of Silverbrook (U.S. Pub. 2003/0156155)

Silverbrook ('082) discloses:

- ***regarding claim 1***, two fluid connectors provided to each connect with a longitudinal end of a respective printhead module, each of the fluid connectors being arranged to connect at least one fluid delivery hose from a fluid supply to the at least

Art Unit: 2853

one channel of the support member mounted at the corresponding longitudinal end of the respective printhead module (Column 5, Lines 63 – 68; Column 6, Lines 1 – 25)

- an associated fluid distribution member (72) and a support member (62) supporting the printhead integrated circuits via the respective fluid distribution members (72) (Column 5, Lines 47-62)

- each support member has at least one longitudinally extending channel (74) for carrying the printing fluid from the printhead integrated circuits which is configured to communicate the printing fluid with the channel of the adjacent support member, the fluid distribution member of each printhead integrated circuit being configured to distribute the printing fluid from the channels to the associated printhead integrated circuit (Column 5, Lines 47-62)

- a casing in which the at least two printhead modules are removably mounted (Column 6, Lines 36 – 40; Column 5, Lines 49 – 54)

- **regarding claim 2**, the support member has complementary female (82, 84 of Figure 8) and male (78, 80 of Figure 8) end portions (Column 5, Lines 63 – 68; Column 6, Lines 1 – 6)

- first one of the two fluid connectors is arranged to interconnect with the female end portion, and a second one of the two fluid connectors is arranged to interconnect with the male end portion (Column 5, Lines 63 – 68; Column 6, Lines 1 – 6)

- **regarding claim 5**, wherein the fluid connectors have at least one tubular portion for connecting with the associated at least one fluid delivery hose and each

Art Unit: 2853

tubular portion is arranged to be in fluid connection with the at least one channel of the printhead module (Column 5, Lines 63 – 68; Column 6, Lines 1 – 6)

- **regarding claim 6**, wherein each tubular portion is arranged so as to form a linear fluid connection with the at least one first channel (Column 5, Lines 63 – 68; Column 6, Lines 1 – 6)

- **regarding claim 7**, wherein the at least one tubular portion is arranged so as to form a linear fluid connection with the at least one first channel (Column 5, Lines 63 – 68; Column 6, Lines 1 – 6)

- **regarding claim 8**, support member (62), the associated fluid distribution members (72) (Column 2, Lines 55 – 62; Column 3, Lines 1 – 15; Column 5, Lines 47-62), and an electrical connector for connecting electrical signals to the at least two printhead integrated circuits (Column 2, Lines 35 – 38)

- each support member has plurality of apertures (74) extending through a wall of the support member arranged so as to direct the printing fluid from the respective channel to associated nozzles in both, or if more than two, all of the printhead integrated circuits by way of respective ones of the fluid distribution members (Column 2, Lines 40 – 43; Column 3, Lines 1 – 15; Column 5, Lines 47-62)

Silverbrook ('082) does not disclose expressly the following:

- **regarding claims 1, 8**, at least two printhead modules each comprising at least two printhead integrated circuits, each of which has nozzles formed therein for delivering printing fluid onto the surface of print media

Silverbrook ('155) discloses:

- **regarding claims 1, 8**, at least two printhead modules each comprising at least two printhead integrated circuits, each of which has nozzles formed therein for delivering printing fluid onto the surface of print media (Paragraphs 0013 - 0016), for the purpose of easily removing and replacing any defective chips in the printhead array, without replacing the entire printhead.

At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of Silverbrook ('155) into the device of Silverbrook ('082), for the purpose of easily removing and replacing any defective chips in the printhead array, without replacing the entire printhead.

Claims 3, 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook (U.S. Pat. 6,916,082) as modified by Silverbrook (U.S. Pub. 2003/0156155) as applied to claim 1 above, and further in view of Wong et al (U.S. Pat. 6,328,423)

Silverbrook ('082) as modified by Silverbrook ('155) discloses:

- **regarding claim 3**, interconnected fluid connectors (Silverbrook ('082): Column 5, Lines 63 – 68; Column 6, Lines 1 – 6)

Silverbrook ('082) as modified by Silverbrook ('155) does not disclose expressly the following:

- **regarding claim 3**, a sealing adhesive is provided at the interfaces of the interconnected fluid connectors

- **regarding claim 4**, the sealing adhesive is an epoxy

Wong et al discloses:

- **regarding claim 3**, a sealing adhesive is provided at the interfaces of the interconnected fluid connectors (Column 3, Lines 1 – 4, 20 - 23), for the purpose of bonding/sealing fixtures and preventing ink leakage.

- **regarding claim 4**, the sealing adhesive is an epoxy (Column 3, Lines 1 – 4, 20 - 23), for the purpose of bonding/sealing fixtures and preventing ink leakage.

At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of a sealing adhesive is provided at the interfaces of the interconnected fluid connectors; the sealing adhesive is an epoxy as taught by Wong et al into the device of Silverbrook ('082) as modified by Silverbrook ('155) , for the purpose of bonding/sealing fixtures and preventing ink leakage.

Response to Arguments

Applicant's arguments filed 8/22/2006 have been fully considered but they are not persuasive. Applicant argues that Silverbrook ('155) merely discloses print chips and not printhead modules. However, Silverbrook ('155) clearly states the invention provides an array of abutting printhead modules in a page width printer with each compromising print chips having a plurality of MEMS printing device thereon (Paragraphs 0013-0015)

Silverbrook ('082) discloses associated fluid distribution members (72) to distribute printing fluid and a support member (62) supporting the printhead integrated circuits via the respective fluid distribution members (72, Figures 8-9)

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 2853

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Uhlenhake whose telephone number is (571) 272-5916. The examiner can normally be reached on Monday - Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JSU

October 20, 2006


STEPHEN MEIER
SUPERVISORY PATENT EXAMINER